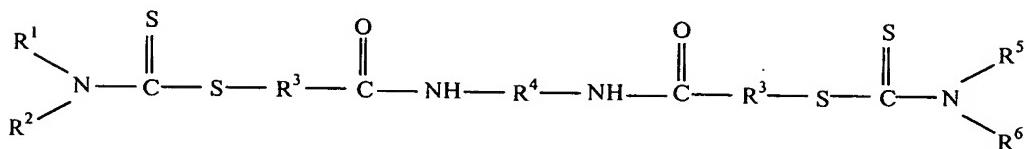


WHAT IS CLAIMED IS:

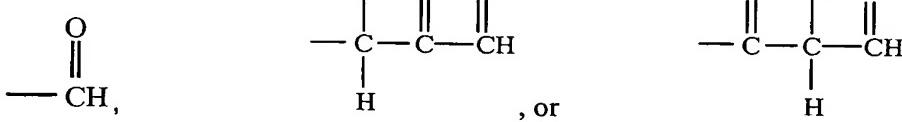
1. A dithiocarbamate derivative compound of the general formula:



5

wherein R<sup>1</sup>, R<sup>2</sup>, R<sup>5</sup> and R<sup>6</sup> are each independently C<sub>1</sub>-C<sub>30</sub> n-alkyl, C<sub>3</sub>-C<sub>30</sub> branched alkyl, C<sub>3</sub>-C<sub>12</sub> cycloalkyl, C<sub>5</sub>-C<sub>12</sub> aryl, or C<sub>6</sub>-C<sub>12</sub> alkylaryl; R<sup>3</sup> are each independently C<sub>2</sub>-C<sub>20</sub> alkylene and R<sup>4</sup> is C<sub>1</sub>-C<sub>20</sub> alkylene substituted with a compound selected from the group consisting of

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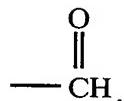


2. The dithiocarbamate derivative compound of Claim 1, wherein R<sup>1</sup>, R<sup>2</sup>, R<sup>5</sup> and R<sup>6</sup> are each independently a straight-chained, branched or cyclic alkyl group of from about 2 to about 30 carbon atoms; R<sup>3</sup> is a divalent alkylene group of from about 15 2 to about 12 carbon atoms; and the alkylene group of R<sup>4</sup> is a divalent alkylene group of from 1 to about 12 carbon atoms.

3. The dithiocarbamate derivative compound of Claim 1, wherein R<sup>1</sup>, R<sup>2</sup>, R<sup>5</sup> and R<sup>6</sup> are each independently a straight-chained, branched or cyclic alkyl group of 20 from about 4 to about 24 carbon atoms; R<sup>3</sup> is a divalent alkylene group of from 2 to

about 6 carbon atoms; and the alkylene group of R<sup>4</sup> is a divalent alkylene group of from 1 to about 6 carbon atoms.

4. The dithiocarbamate derivative compound of Claim 2, wherein the alkylene  
5 group of R<sup>4</sup> is substituted with



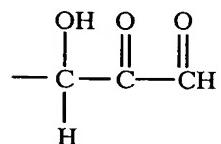
5. The dithiocarbamate derivative compound of Claim 3, wherein the alkylene group of R<sup>4</sup> is substituted with



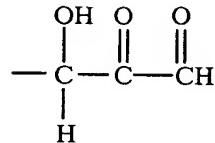
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6. The dithiocarbamate derivative compound of Claim 2, wherein the alkylene group of R<sup>4</sup> is substituted with

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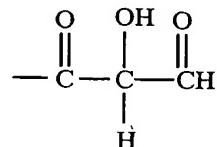


7. The dithiocarbamate derivative compound of Claim 3, wherein the alkylene group of R<sup>4</sup> is substituted with



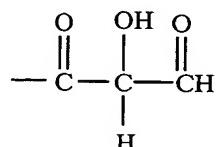
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8. The dithiocarbamate derivative compound of Claim 2, wherein the alkylene group of R<sup>4</sup> is substituted with



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9. The dithiocarbamate derivative compound of Claim 3, wherein the alkylene group of R<sup>4</sup> is substituted with



10. A lubricating oil composition comprising (a) an oil of lubricating viscosity and (b) a functional property-improving effective amount of at least one dithiocarbamate derivative compound of Claim 1.

11. A lubricating oil composition comprising (a) an oil of lubricating viscosity and (b) an antiwear -improving effective amount of at least one dithiocarbamate derivative compound of Claim 1.

5           12. A lubricating oil composition comprising (a) an oil of lubricating viscosity and (b) a friction reducing effective amount of at least one dithiocarbamate derivative compound of Claim 1.

10          13. A lubricating oil composition comprising (a) an oil of lubricating viscosity and (b) an antioxidant-improving effective amount of at least one dithiocarbamate derivative compound of Claim 1.

15          14. A method for improving at least one functional property of a lubricating oil which comprises adding to the lubricating oil a functional property-improving effective amount of at least one dithiocarbamate derivative compound of Claim 1.

15. A method for improving the anti-wear property of a lubricating oil which comprises adding to the lubricating oil an anti-wear-improving effective amount of at least one dithiocarbamate derivative compound of Claim 1.

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16. A method for improving the friction reducing property of a lubricating oil which comprises adding to the lubricating oil a friction reducing effective amount of at least one dithiocarbamate derivative compound of Claim 1.

17. A method for improving the antioxidant property of a lubricating oil which comprises adding to the lubricating oil an antioxidant-improving effective amount of at least one dithiocarbamate derivative compound of Claim 1.

5           18. A reaction product obtained from (a) a di(hydrocarbyl)thiocarbamate intermediate derived from the reaction of a dihydrocarbylamine and carbon disulfide; (b) an amide of the general formula  $R^7CONH_2$  wherein  $R^7$  is an alkylene group having 2 to about 30 carbon atoms; and (c) an effective amount of a carbonyl-containing compound.

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19. The reaction product of Claim 18 wherein the amide is acrylamide and the carbonyl-containing compound is a dialdehyde.

20. The reaction product of Claim 19 wherein the dialdehyde is selected from  
15       the group consisting of glyoxal and glutaraldehyde.

21. The reaction product of Claim 18 wherein the amide is acrylamide and the carbonyl-containing compound is glyoxal.

20           22. The reaction product of Claim 18 wherein the dihydrocarbylamine is a dialkylamine in which each alkyl group contains from about 2 to about 30 carbon atoms.

23. A lubricating oil compositions comprising (a) an oil of lubricating viscosity and (b) a functional property-improving effective amount of the reaction product of Claim 18.

5           24. A lubricating oil compositions comprising (a) an oil of lubricating viscosity and (b) a functional property-improving effective amount of the reaction product of Claim 19.

10          25. A lubricating oil compositions comprising (a) an oil of lubricating viscosity and (b) a functional property-improving effective amount of the reaction product of Claim 21.

15          26. A lubricating oil composition comprising (a) an oil of lubricating viscosity and (b) an antiwear-improving effective amount of the reaction product  
Claim 18.

20          27. A lubricating oil composition comprising (a) an oil of lubricating viscosity and (b) a friction reducing effective amount of the reaction product Claim 18.

28. A lubricating oil composition comprising (a) an oil of lubricating viscosity and (b) an antioxidant-improving effective amount of the reaction product  
Claim 18.

29. A method for improving at least one functional property of a lubricating oil which comprises adding to the lubricating oil a functional property-improving amount of the reaction product Claim 18.

5           30. A method for improving the anti-wear property of a lubricating oil which comprises adding to the lubricating oil an anti-wear-improving amount of the reaction product Claim 18.

10          31. A method for improving the friction reducing property of a lubricating oil which comprises adding to the lubricating oil a friction reducing amount of the reaction product Claim 18.

15          32. A method for improving the antioxidant property of a lubricating oil which comprises adding to the lubricating oil an antioxidant-improving amount of the reaction product Claim 18.

33. A fuel composition comprising a major amount of a hydrocarbon fuel and a minor effective amount of the dithiocarbamate derivative compound of Claim 1.

20          34. A fuel composition comprising a major amount of a hydrocarbon fuel and a minor effective amount of the dithiocarbamate derivative compound of Claim 3.

35. A fuel composition comprising a major amount of a hydrocarbon fuel and a minor effective amount of the reaction product of Claim 18.

36. A fuel composition comprising a major amount of a hydrocarbon fuel and  
a minor effective amount of the reaction product of Claim 19.
37. A fuel composition comprising a major amount of a hydrocarbon fuel and  
5 a minor effective amount of the reaction product of Claim 21.
38. The fuel composition of Claim 33 wherein the hydrocarbon fuel is  
gasoline or diesel fuel.
- 10 39. The fuel composition of Claim 34 wherein the hydrocarbon fuel is  
gasoline or diesel fuel.
40. The fuel composition of Claim 35 wherein the hydrocarbon fuel is  
gasoline or diesel fuel.
- 15 41. The fuel composition of Claim 36 wherein the hydrocarbon fuel is  
gasoline or diesel fuel.
42. The fuel composition of Claim 37 wherein the hydrocarbon fuel is  
20 gasoline or diesel fuel.